

APR 24 2007

Appl. No. 10/543,003  
Amtd. dated April 24, 2007  
Reply to Office Action of February 26, 2007

PATENT

**REMARKS/ARGUMENTS****Restriction Requirement**

The Examiner has issued a restriction requirement, alleging that the inventions listed as Groups I-IV do not relate to a single inventive concept under PCT Rule 13.1, asserting that each group has a different special technical feature not shared by the remaining groups. The Examiner further requires election of a single sequence selected from SEQ ID NOs:1-4.

Applicants hereby elect with traverse the claims of Group I (claims 1, 3, and 5) and the sequence of SEQ ID NO:3. According to PCT Rule 13.2, unity of invention exists when there is a special technical relationship among the claimed inventions involving one or more special technical features. The expression "special technical features" means those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. Here, as discussed in more detail below, the unity of invention requirement is met because the inventions of Groups I-IV share a special technical feature, namely, the dopaminergic neuron proliferative progenitor cell marker polynucleotide.

With regard to the claims identified as Group I by the Examiner, claim 1 reads on a dopaminergic proliferative progenitor cell marker polynucleotides comprising specific nucleotide sequences. Claim 3 uses the polynucleotides of claim 1, in methods of selecting a dopaminergic neuron proliferative progenitor cell. Claim 5 relates to methods of selecting post-mitotic dopaminergic neuron progenitor cells, using cells identified by the method of claim 3.

With regard to the claims identified as Group II by the Examiner, claim 6 reads on the dopaminergic neuron proliferative progenitor cell specifically selected using the method of claim 3, and claim 9, reads on a postmitotic dopaminergic neuron progenitor cell specifically selected using the method of claim 5.

Claim 7, identified as Group III by the Examiner, comprises the step of detecting and isolating a gene specifically expressed in the progenitor cell of claim 6 (Group II), and claim 8, identified as Group IV by the Examiner relates to methods of screening. Moreover, claims 7 (Group III) and 8 (Group IV) specifically use the proliferative progenitor cell of claim 6 (Group II). Applicants respectfully submit that all of the claims 1, 3, and 5-9 comprise the dopaminergic

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neuron proliferative progenitor cell marker polynucleotides of claim 1, i.e., the special technical feature shared by the claimed invention. In view of the above, Applicants contend that the claims of Groups I-IV, which share the special technical feature, should be examined in a single application, even though they are directed to different inventions.

Furthermore, Applicants point out that the sequences of SEQ ID NOs:1-4 alleged by the Examiner to be independent and distinct sequences, are respectively the cDNA nucleotide sequence of murine and human Lrp4 and the amino acid sequence of murine and human Lrp4. See, page 6, lines 11-18 and page 7, lines 5-17 of the specification. As shown in Exhibit A, an alignment of SEQ ID NO:1 and SEQ ID NO:2 reveals an 83% identity between the murine and human Lrp4 at the nucleotide level. Similarly, as shown in Exhibit B, the alignment of SEQ ID NO:3 and SEQ ID NO:4 reveals a 82% identity between murine and human Lrp4 at that amino acid level. Thus, SEQ ID NOs:1-4 share the common property of encoding Lrp4 and therefore share a significant structural element.

MPEP, Appendix AI, Administrative Instructions Under the PCT, ANNEX B(f)(i) stipulates that when "all alternatives have a common property or activity" or "a common structure is present, i.e., a significant structural element is shared by all of the alternatives", they shall be regarded as being of a similar nature. Based on this fact, Applicants believe that at least SEQ ID NOs:1 and 2 and SEQ ID NOs:3 and 4, which are structurally and functionally related, should be examined in a single application.

In addition, MPEP, Appendix AI, Administrative Instructions Under the PCT, ANNEX B(1) stipulates that "[e]xamples giving guidance on how these principles may be interested in particular cases are set out in the PCT International Search and Preliminary Examination Guidelines". The PCT International Search and Preliminary Examination Guidelines discloses at chapter 10.59, Example 39, that when a DNA molecule encodes a specific protein, the protein and the DNA encoding the protein share a corresponding technical feature, and consequently have unity of invention. In the instant case, the nucleotide sequences of SEQ ID NOs:1 and 2 encode the amino acid sequences of SEQ ID NOs:3 and 4, respectively. In view of the above, Applicants request that the Examiner reconsider the restriction requirement, and examine SEQ ID NOs:1-4 in a single application.

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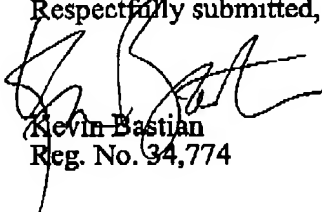
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**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

  
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